

## **APPENDIX C**

**3<sup>rd</sup> O'Leary Provisional Application**  
**Serial No. 60/161,300**  
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# PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53(b)(2).

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TITLE OF THE INVENTION (280 characters max)							
METHOD FOR USING AUTOMATED TELLER MACHINE SWITCH SETTLEMENT FOR PROCESSING TRANSACTIONS							
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ENCLOSED APPLICATION PARTS (check all that apply)							
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Our check No. 88906 is enclosed to cover the Provisional Application filing fee				PROVISIONAL APPLICATION FILING FEE AMOUNT (\$)		\$ 150.00	
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The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government

☐ No ☐ Yes, Agency and Government contract number are \_\_\_\_\_

Respectfully submitted,

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METHOD FOR USING AUTOMATED TELLER MACHINE SWITCH  
SETTLEMENT FOR PROCESSING TRANSACTIONS

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RELATED APPLICATION

This application is based on and claims priority to U.S.  
Provisional Patent Applications Nos. 60/132,305, filed May 3, 1999, and  
60/150,725, filed August 25, 1999, the entire disclosures of which are hereby  
15 incorporated by reference.

FIELD OF THE INVENTION

The present invention generally relates to methods for  
processing electronic payments purchases made over the Internet and more  
particularly to a method by which a consumer pushes a payment to an Internet  
20 merchant.

BACKGROUND OF THE INVENTION

Presently, there are several methods by which a consumer can  
25 electronically pay for purchases made on the Internet, such as credit cards, off-  
line debit cards, online debit cards, digital cash, and smart cards. Each of  
these methods has its own advantages and disadvantages. An off-line debit  
card uses the traditional credit card system for clearing the payment but no  
Personal Identification Number (PIN) is required. The use of an on-line debit  
30 card requires that the consumer supply his or her PIN, and the amount of the  
purchase is debited from the consumer's account instantaneously. One

disadvantage with both the on and off-line debit cards, from a consumer's point of view, is the inability to reverse or repudiate the transaction. In contrast, by use of a credit card, the consumer at a later date can reverse the transaction (e.g., if the purchased goods are never shipped to the consumer).

5           It is predicted that credit cards will be the dominant on-line point of sale (POS) payment choice for at least the next five years. While new Internet payment mechanisms have been rapidly emerging, consumers and merchants have been happily conducting a growing volume of commerce using basic credit card functionality. None of the emerging efforts to date  
10           have gotten more than a toehold in the market place and momentum continues to build in favor of credit cards.

          Automated Clearing House (ACH) payments have begun to be used with respect to payments made via the Internet. These types of transactions typically involve payments made with respect to loans, insurance  
15           and utilities. It is predicted that ACH payments will not be widely deployed to on-line POS for two reasons. First, an ACH transaction does not provide transaction authorization, and secondly, authentication requires a pre-existing relationship between the customer and the merchant. Furthermore, ACH payments have to be received, deposited and cleared before the funds are  
20           available. In contrast to ACH transactions, credit and off-line debit cards require authorization but not authentication. Similarly, on-line debit requires authentication (i.e., a PIN or other authentication).

          Two significant drawbacks with some or all of the above models for Internet POS payments are that:

1) a pre-existing relationship between the consumer and the merchant must exist; and 2) the consumer is required to provide the merchant with his or her account and/or PIN. The first drawback of some of the above models cannot be practically overcome as it is impossible for a consumer to have pre-existing relationships with all of the potential merchants conducting business on the Internet. With respect to the provision of the consumer's account and PIN number over the Internet, even though mail order companies have been operating in this manner for years, many consumers feel uneasy about electronically providing their account and PIN numbers to strangers over the Internet.

Figure 1 depicts the conventional debit/credit transaction model. In this model, if the consumer 100 desires to buy a compact disc (CD) from a web retailer 100, the consumer 100 electronically transmits its debit or credit card number and/or PIN to the web retailer 110. Upon receipt of this information from the consumer 100, the retailer 110 submits the proposed transaction to its bank 120 for approval. The merchant's bank 120 then contacts the bank 130 (issuer bank) which issued the debit/credit card to the consumer 100. The issuer 130 checks the consumer's balance on the card and either approves or rejects the proposed transaction. This approval or denial is transmitted from the issuer bank 130 back to the merchant bank 120 which then informs the web retailer 110 of the approval or denial. If the charge to the debit/credit card was approved, the transaction is completed by the web retailer 110 shipping the goods to the consumer 100.

The at least one of the drawbacks described above equally applies to electronic bill payment. The first drawback, requiring a pre-existing

relationship between the consumer and bill payee is not as great a concern because this relationship most likely already exists between the consumer and the payee (e.g., the telephone, cable or utility company for example). The second drawback which requires the consumer to provide the payee with his or her account and/or PIN still remains a concern with electronic bill payment. Although fraud is less of a problem with respect to bill payment, since the consumer presumably has regular dealings with the payee, some consumers still view the provision of the payee with at least his/her account number a diminution in the consumer's privacy.

#### SUMMARY OF THE INVENTION

In the method of the present invention, a consumer uses its Internet software to browse the Internet for goods being offered by various Internet merchants. Once the customer finds an item its wishes to purchase, the consumer's Internet software extracts from the merchant's web site a price quote for the proposed purchase along with an identification of the merchant's bank and account number. The customer then transmits a payment request message to its own bank over the Internet. This payment request message simultaneously requests that the consumer's account be debited for the amount of the price quote and that the payment be made crediting the merchant's account at the merchant's bank. If there is sufficient funds in the consumer's account, the consumer's bank will return a payment advice digitally over the Internet which guarantees the payment. This payment advice is then transmitted by the customer's Internet software to the merchant's Internet server. With guaranteed funding, the merchant can immediately deliver the

goods of services to the consumer. In an alternative embodiment, the payment advice is transmitted via the Internet directly from the consumer's bank to the merchant's Internet server.

Payment totals for each merchant are settled on a daily basis using Electronic Funds Transfer via the regional ATM network infrastructure with funds being moved from the consumer's account at its bank to the merchant's account at its bank.

By the method of the present invention, both of the significant disadvantages of the prior art have been overcome. First of all, the consumer is no longer providing its confidential financial information to strangers over the Internet. Rather, the consumer is dealing directly with its own trusted institution, the bank. Furthermore, no pre-existing relationship has to exist between the customer and the merchant. The only requirement is that the merchant recognize and honor the guaranteed payment from the consumer's bank.

The present invention significantly reduces the transactional cost as compared to the use of credit cards. The method also provides a reduction in fraud and credit losses, while the finality of the transaction virtually eliminates dispute and chargeback processing from the viewpoint of the financial institution.

The present invention is not limited to the case of a consumer making purchases from Internet merchants. The method has further, broader applicability by providing the ability for anyone with an account at a financial institution to transfer funds to anyone else who also has an account at the same or a different financial institution.

## BRIEF DESCRIPTION OF THE DRAWINGS

For the purposes of illustrating the present invention, there is shown in the drawings a form which is presently preferred, it being understood however, that the invention is not limited to the precise form shown by the drawing in which:

Figure 1 illustrates the prior art method of Internet payment processing using debit and/or credit cards;

Figure 2 depicts a first embodiment of the method of the present invention;

Figure 3 depicts a second embodiment according to the method of the present invention;

Figure 4 illustrates a third embodiment of the method of the present invention;

Figure 5 illustrates additional details of the method of the present invention;

Figure 6 illustrates a specific example of the method of Figure 4;

Figure 7 illustrates a specific example of the method of the present invention;

Figure 8 illustrates a specific example of the method of the present invention;

Figure 9 illustrates a specific example of the method of the present invention;

Figure 10 illustrates a specific example of the method of the present invention;



Figure 11 illustrates a specific example of the method of the present invention; and

Figure 12 illustrates a specific example of the method of the present invention.

#### DETAILED DESCRIPTION OF THE INVENTION

In contrast to the credit card, on-line and off-line debit and other payment models existing today, one of the unique features of the method of the present invention is the flow of the payment instruction and the payment which follows. In the credit card, on-line and off-line debit models, a consumer provides the merchant with an instruction that authorizes the merchant to collect funds from the consumer's bank account. Depending on the system, this payment instruction results in a guaranteed customer payment in the case of an on-line debit rather than a lengthy wait for funds (such in the case of a check) or something in between in the case of an off-line debit and credit card. The difference between the prior art models and the model of the present invention can be described as the difference between a "pull" and a "push" model. In the conventional models of today, the merchant "pulls" the payment from the consumer's account, while in the present invention the customer "pushes" the payment to the merchant's account.

Figure 2 illustrates a first embodiment of the method of the present invention. Prior to conducting any on-line purchases using the method of the present invention, the consumer establishes an Internet payment account (IPA) 230 with its bank 220. Once this IPA account 230 has been established, the consumer funds this account from its demand deposit account (DDA) 240.

The establishment of a separate IPA 230 is preferable from a consumer's point of view in order to provide a separate accounting and statement from its normal DDA account 240. Furthermore, the IPA account might not be interest bearing and the consumer would accordingly only fund small amounts into this account in order to cover potential on-line purchases. In an alternative embodiment of the present invention, the consumer's payment request for credits and debits can be made directly against its DDA account 240.

Furthermore, the IPA 230 can be funded from a consumer's Line of Credit or credit or debit card account held by the bank 220 or any other linked account from which the consumer can transfer funds.

The consumer uses Internet browsing software 200 in order to initiate a payment transaction. In one embodiment of the present invention, the Internet software is loaded on the consumer's personal computer 201. In alternative embodiments, the software can reside in a web enabled ATM machine 202, or remotely located and accessed via a telephone 203. The element Other 204 has been illustrated in order to convey that the present invention is not limited by any particular physical device and can employ any device which provides access to the Internet. For example a public Internet kiosk which provides access to the Internet can be used to practice the present invention.

In one embodiment of the present invention, the Internet software 200 is used in order to browse the Internet and visit the web sites of various merchants. As a consumer browses the web site of a particular merchant 210, all of the information viewed by the consumer is downloaded onto the consumer's computer or the device which is providing the Internet

access. This downloaded information includes prices for the goods and services offered by the merchant as well as an identification of the merchant's bank 250 and the number of an account 260 which the merchant holds at its bank 250. If a consumer decides to go ahead with a particular purchase, the consumer's Internet software 200 extracts from the downloaded information the price for the item and the identification of the merchant's bank 250 and account number 260. A transaction identifier is preferably assigned at this time either by the merchant's Internet server 210 or the consumer's software 200.

In another embodiment of the present invention, the entity who will eventually be receiving funds from the consumer can be an individual. For example, the consumer might be responding to a classified advertisement (electronic or traditional paper) or purchasing an item or a service through an electronic auction site such as eBay(TM). In either of these cases, the consumer obtains the payee's bank 250 identification and account number 260 in a variety of ways. In one method, the consumer obtains this information electronically from the service where it contacted the individual (e.g. through eBay(TM)). Alternatively, the consumer can obtain the necessary destination bank information through offline methods such as the traditional paper classified advertisement or through an Email which has been "pushed" to the consumer by the potential payee.

In an alternative bill paying embodiment, the consumer has all of the relevant bank and account information for each of the payees (e.g. telephone service provider) which the consumer regularly pays bill electronically. An electronic bill can be presented to the consumer either

through E-mail or from an Internet site maintained by the payee or by a Consumer Service Provider for the payee. The bill can contain a button for paying the bill through the use of the present invention (i.e. through the ATM system). When the customer selects the button, a template is presented to the customer which has all of the bank and account information prefilled. The customer merely fills in the amount he/she wishes to pay. Upon completion, the user selects a transmit button in response to which the payment message is formatted with the supplied information and transmitted to the consumer's bank for processing. The same payment template can be used either included in an E-mail or from the payee's web site as described above.

In a further embodiment, the consumer has a personal relationship with the eventual payee and has been previously provided with the destination banking information by the eventual payee. For example, if a parent has a son or daughter away at college, the parent has knowledge of the child's bank 250 and account 260 and is able to transfer funds to the child's account 260 in a simple, quick and cost efficient manner by use of the present invention.

Returning to Fig. 2, with the bank 250 identification and account 260 information in hand, the consumer's Internet software 200 formats and transmits a message containing this information to its own bank 220. The message will contain at least the identification of the consumer's account 230, the destination bank 250, and the destination account 260. For example, this payment instruction from the consumer asks that fifty dollars be debited against its account #1234 and that credit be forwarded to merchant's account #5678 at the merchant's bank.

With respect to authentication, because the consumer is pushing the payment to merchants or other entities or individuals, rather than the merchants pulling payments from consumer accounts, the consumers do not need to authenticate themselves to the merchant. Rather, the consumers  
5 authenticate themselves to their own bank 220 which then executes the payment to the merchant's account. The consumer's bank 220 will require some form of authentication of the payment request from the consumer. This authentication can be in the form of a software certification, an encrypted PIN, or the mother's maiden name of the consumer. Once the bank 220 has  
10 authenticated that the message truly originated from the consumer, the bank 220 can then fulfill the payment request.

This method of the present invention is quite attractive to consumers because they can pay any individual or entity regardless of the existence of a pre-existing relationship with that individual or entity. The  
15 transaction can furthermore be conducted from anywhere there is access to the Internet. The IPA account 230 can be used and managed through the consumer's PC 201, a web enabled ATM 202, by phone 203 or by any other web enabled device 204. With respect to merchants, individuals or other  
20 entities which are paid by the method of the present invention, there are several advantages. This method opens up a universe of buyers/payors without the access or desire to use credit or debit cards online. A very low effort is required on the part of a merchant which only has to publish its bank  
25 250 and IPA deposit only account 260 information on its web site. If a merchant has been using traditional credit card methods, the present invention provides the merchant with significant savings in credit card processing, fraud

loss, and chargeback costs. The present invention also provides the ability to economically accept micropayments.

Returning again to Fig. 2, in fulfilling the payment request from the consumer, the bank 220 will initially verify that there are sufficient funds in the consumer's IPA account 230 to satisfy the payment request. If there are sufficient funds in the consumer's IPA account 230, the account is immediately debited or the funds held such that funds equal to the amount of the payment are no longer available in the customer's IPA account 230. The funds debited from the consumer's IPA account 230 are credited to the destination account 260 as described in more detail below. If insufficient funds exist in the customer's IPA account 230, the payment request is denied and the consumer's Internet software 200 is informed of the insufficient funds condition. In an alternative embodiment of the present invention, the consumer is provided with the ability to transfer funds from its DDA account 240 into the IPA account 230 such that sufficient funds are available to cover the payment request.

If sufficient funds exist in the IPA account 230 to process the payment request, the consumer's bank 220 generates a digital payment advice which is transferred back over the Internet to the consumer's Internet software 200. In a preferred embodiment, this payment advice is digitally signed by the consumer's bank 220, thus guaranteeing the payment. Once this payment has been digitally signed by the consumer's bank 220, all of the risk associated with this payment lies with the consumer's bank 220 and not with the merchant 210 or its bank 250 as with some of the models described above. For this reason, the model of the present invention is an attractive alternative to

merchants conducting business on the Internet. Various forms of implementing the digital signature by the consumer's bank 220 are well known in the art.

5           Upon receipt of the payment advice from the consumer's bank 220, the consumer's Internet software 200 forwards this payment advice to the merchant's Internet server 210. Once the merchant has received the payment advice from the consumer's Internet software 220, the transaction can be completed by the shipment of the goods or provision of the service to the consumer.

10           The settlement process between the consumer's bank 220 and the merchant's bank 250 typically occurs once a day, at the end of the day, but may occur in real time or batched processed when the transactions reaches a dollar or absolute number limit. As described above, the consumer's IPA account 230 has been debited for the amount of the purchase. This debited  
15           amount now needs to be transferred to the merchant's bank 250 in order that a credit be applied to the merchant's account 260. In a preferred embodiment of the present invention, the merchant has established a deposit only IPA 260 in which funds can only be deposited and not withdrawn. This is a security feature which protects the merchant from various forms of electronic fraud.  
20           Alternatively, the destination account 260 could be another type of deposit only account or a DDA account in the case where the receiving party truly trusts the consumer (e.g. the parent/child relationship previously described).

25           In the present invention, the consumer's bank 220 accomplishes the payment settlement via the conventional ATM electronic Funds Transfer process. Using this well known process, the consumer's bank 220 designates

the merchant's bank 250 and the specific account 260 to which the credit of the purchased amount should be applied. Furthermore, the consumer's bank can include in the ATM message the transaction ID previously described for tracking and auditing purposes by the merchant and the merchant's bank 250.

5 This auditing information allows the merchant to match the merchant's payables to its receipts. This information can also be used in the reconciliation process with respect to the merchant's account.

Periodically, funds from the merchant's deposit only IPA account 260 are transferred (swept) by the merchant bank 250 into the merchant's conventional DDA account 270.

10 Figure 3 illustrates an alternative embodiment of the present invention. All of the initial steps with respect to the consumer browsing the merchant's web site and formulating the payment request which is forwarded to its bank 220 are the same as illustrated in Figure 2. The difference in the embodiment illustrated in Figure 3 as compared with the embodiment depicted in Figure 2 is that the payment advice from the consumer's bank 220 is forwarded directly to the merchant's Internet server 210. This payment advice will therefore come from a separate Internet Protocol (IP) address from the address that connects the consumer's Internet software 200 to the merchant's Internet server 210. This feature will provide additional confidence to the merchant that the advice has indeed originated from the consumer's bank and is not a fraudulently generate advice.

20 The push model of the present invention has significant advantages over the conventional methods used today. This method is extremely easy for online banking customers to adopt. The method guarantees



payment to the merchant without any concerns about repudiation inherent in the use of a credit card. The present invention reduces fraud losses compared to offline debit, credit card or checks. The method allows consumers to conduct online shopping without having to provide any personal confidential financial information to unknown merchants. The method allows consumers to conduct these financial transactions solely with its own financial institution.

Fig. 4 illustrates the broader embodiment of the present invention briefly described above. In this embodiment, a customer 1 (payor) of a financial institution is able to transfer funds to a customer 2 (payee) of the same or different financial institution. This embodiment is particularly suitable for the bill payment example described above. Prior to the practice of the method illustrated in Fig. 4, both customer 1 (payor) and customer 2 (payee), must each have established an account and deposited funds into their respective financial institutions. In a preferred embodiment, these accounts are specific Internet Payment Accounts (IPA) I1 and I2, at the customers' respective banks B1 and B2 (Fig. 5). Here, customer 1 has deposited \$1000 into IPA I1 and customer 2 has deposited \$200 into IPA I2. As previously described, an IPA can be funded through any linked account such as the customer's DDA or credit account, or through another IPA. The customer does not need to have a DDA or credit account at a bank to set up an IPA, as these accounts could be funded by accounts at another bank or through cash. As shown in Fig. 5, however, both customer 1 and customer 2 have linked DDA accounts D1 and D2, respectively, to IPA I1 and IPA I2. Once this is done, the IPAs can be used for web shopping, pay anyone anywhere, and bill payment. Alternatively, as described above, the payments made according to

the method of the present invention can be made directly from/to a DDA account.

Once customer 1 has set up its IPA I1, the customer 1 can request that payments be made (e.g. bills) through the IPA I1. With this payment system, customer 2, the payment recipient, can be a billing company, such as a telephone company. As previously described with respect to Fig. 3, in step 400, the payment can be requested by phone, ATM or PC. Customer 1 must give his/her bank, B1, the following information: the payment amount, customer 2's BIN and IPA#. In step 410, this information is used by bank B1 to create a transaction instruction filed under a transaction ID#, T1. Because customer 1 is directly contacting his/her own bank B1, no authorization is required. Customer 1 authenticates him/herself by inputting a pin number or other ID. In step 420, after authentication, customer 1's bank, B1, debits customer 1's IPA, I1, by the amount of the payment (e.g. \$100 as illustrated in Fig. 4). In step 430, the transaction instruction representing the credit to customer 2 is transmitted to customer 2's bank B2 through the ATM network. The receiving bank B2 can send a confirmation message back to customer 1 through its bank B1 that the transaction was received by bank B2.

In step 440, upon its receipt by the bank B2, the transaction information T1 representing the credit to customer 2's account, is stored in a personal virtual lockbox. Alternatively, the credit is directly applied to customer 2's IPA I2. The concept of a personal virtual lockbox is borrowed from retail lockbox processing in which a bank collects the receivables for an entity and performs the financial processing on such receivables. The personal virtual lockbox in the present invention operates similarly in that it stores

receivables throughout the day for customer 2 which are then swept, in step 450, into the customer's IPA I2. In step 460 the actual credit is applied to customer 2's IPA I2.

Reference is now made to Fig. 6 which illustrates a further example of the present invention. Fig. 6 illustrates a specific application of the present invention in which a customer 1 desires to transfer funds to customer 2, where customer 2 is anyone that needs to be paid, such as one's gardener, or anyone who requires funds, such as a child at college. As with the example of Fig. 4, customer 1 and customer 2 preferably have established and deposited funds into Internet payment accounts IPA I1 and IPA I2 at the customer's respective banks B1 and B2 (Fig. 5). Customer 1, for example the owner of real property, has deposited \$1000 into IPA I1 and customer 2, for example a gardener, has deposited \$200 into IPA I2.

Although not necessary, customer 1 and customer 2 have established DDA accounts D1, D2, respectively, at their banks B1, B2 to link with the IPA accounts.

At step 600, customer 1 requests that a payment be made, for example by phone, ATM, PC, etc. In this instance, customer 1 wishes to transfer \$100 from his IPA account I1 in bank B1 to customer 2's IPA account I2 at bank B2. At step 610, customer 1 provides his payment account number, customer 2's BIN number and customer 2's IPA account number. This produces a transaction instruction for a particular transaction, here designated ID# 1, where the BIN number is designated B2 and the IPA number is designated I2. Customer 1 authenticates himself by inputting a pin number or other such ID number into the system.

At step 620, bank B1 debits customer 1's IPA I1 by \$100, leaving IPA I1 with a balance of \$900. At step 630, the transaction instruction is transmitted to bank B2 through the ATM switch network.

At step 640, the transaction instruction commanding a deposit into customer 2's IPA account I2 is stored in a personal virtual lockbox. As previously discussed, the credit to customer 2's IPA account I2 may alternatively be directly applied rather than utilizing the virtual lockbox. The credit of \$100 is applied to customer 2's IPA I2 when accounts are swept in. At step 650, customer 2 actually receives the \$100 credit to his account and is provided with a bill payment message indicating that the transaction was completed.

Those skilled in the art will appreciate that the above example applies equally well to the situation in which customer 1 would wish to transfer funds to, for example, a child at college, rather than providing funds in exchange for services.

The following sections will describe five different specific embodiments of the present invention with respect to Figures 7-12.

#### Product Definition:

The Global Internet Pay Anyone account is a safe, sound, and secure electronic payment system which will allow consumers and merchants to shop on the web, pay bills, and pay anyone virtually anywhere. Through the use of Internet technology married to an existing payment infrastructure, consumers and merchants alike will find that Internet Pay Anyone (IPA) accounts are both efficient and convenient, while offering the highest levels of

security. The following document illustrates how five different transaction types would flow through this payment system.

IPA accounts are available to both consumers and merchants. By furnishing both payors and payees with IPA's, banks can validate the identities of both parties. In addition, all payment messages are 128 bit SSL encrypted. This coupling of authentication and encryption provide consumers and merchants with the comfort that their transactions are secure and private. The IPA enriches the consumer e-commerce experience by eliminating the tedious process of filling out lengthy payment and shipping fields- this is done automatically. Merchants will also benefit from the above features, as research indicates that most e-commerce purchases are abandoned at the point of sale due to consumers' unwillingness to complete lengthy forms or provide personal credit card numbers. Once a transaction is authorized on the web, it is then passed through the existing ATM infrastructure.

#### Product Components:

The enabling functionality resides in two pieces: a consumer "Wallet" and a merchant "Virtual Private Lockbox" (VPL). The Wallet and VPL is software that, when installed, augments any Internet browser with e-commerce capability. The software sits in front of (and links to) an IPA account. This account is a special purpose DDA with limited functionality.

The Wallet: Consumers access their IPA's via their Wallet, which is accessible through their Internet browser. Consumers use this Wallet to fund their account, shop on the web, pay bills, pay anyone else with an IPA, receive funds from any IPA owner, and check their recent Wallet activity. The Wallet sits in front of their IPA account, which is a limited purpose DDA

account that sends transactions over the ATM network. The Wallet provides consumers with a safe, secure, and convenient way to conduct financial transactions over the web.

The VPL: Merchants access their IPA's via their VPL which, like a Wallet, is accessible through any Internet browser. The VPL securely receives all payments via the ATM network. Once a day, these funds can be automatically swept from their IPA to their DDA account. In addition, the VPL supplies merchants with value-added services. The VPL provides online, real-time transaction reports, which reconcile accounts receivable/purchase records against payment records. All transactions are archived and retrievable via the VPL's payment search engine, so that merchants will have powerful data mining and customer service tools at their fingertips. These features make the VPL the perfect vehicle for order fulfillment and record keeping.

With respect to Figure 7, Initiating/Funding the Wallet - The Internet Pay Anyone (IPA) account is accessed through a virtual Wallet. This Wallet can be accessed via the Internet, ATM, telephone, Kiosk, and even a personal digital assistant. The primary method for funding the Wallet is through the Wallet owner's DDA, credit, and savings accounts, which can be linked to the Wallet through Online Banking. Alternative funding options are by an externally sponsored credit card, by check or money order, or through the ACH network.

Step #	Description
	Installing the Wallet
1	User signs on to Online Banking via PC. Site is 128-bit SSL encrypted, and user is authenticated

2	<p>Once logged on, user selects Wallet option from main menu.</p> <p>There are two options:</p> <ul style="list-style-type: none"> <li>· Install a web Wallet</li> <li>· Move funds to/from Wallet</li> </ul>
3	<p>User selects "Install a web Wallet". Screen instructs user that web Wallet will now be installed as a button on the browser toolbar.</p> <p>Once installed, user is prompted to provide some background information that will assist in web purchases and payments: examples include: shipping name, shipping address, and other optional information.</p>
	Funding the Wallet
4	<p>The primary method for initial and future funding of Wallet is performed through a link between the Wallet and Online Banking. For initial funding of the Wallet, the user will select "move funds to/from Wallet" from online banking menu. User selects "move funds to Wallet", and provides the following:</p>
	<ul style="list-style-type: none"> <li>· Source of funds- checking, credit card, savings, etc.</li> <li>· \$ amount    · funding date</li> <li>· one time or repeat</li> </ul> <p>Upon completion of above, the Wallet is funded (subsequent funding of the Wallet can be done via both the Wallet or directly within Online Banking).</p>
5	<p>In addition to funding via online banking, instructions can be given for funding via phone, ATM, kiosk, or PDA.</p>
	Funding the Wallet from an external credit or debit card, or DDA account
6	<p>For accounts not linked to online banking, user selects "fund with a non-[my bank] account". User selects the financial merchant</p>

	(AMEX, VISA, etc.) and keys in account number, expiration (if applic.), and \$ amount, and a funding request is transmitted to merchant acquirer (this account info will be stored for future funding requests)
7	Merchant Acquirer (such as Chase Merchant Svcs) authorizes the transaction and passes the request through the EFT switch.
8	Financial merchant receives funding request via EFT switch, and verifies card number, expiration, and credit limit.
9	Funding is authorized by financial merchant
10	Funding is received by Wallet, which is an IPA (Internet Pay Anyone) account.
11	Funds are settled once a day between credit card's bank and user's bank's IPA
<b>Note:</b>	Other alternatives sources for Wallet funding are check, money order, or ACH

#### Model #1

With respect to Figure 8, Web Shopping: The Wallet and the Virtual Private Lockbox (VPL) significantly enhances the consumer and merchant experience when used for web shopping. A Wallet icon will be located on the browser toolbar. When shopping the web, the user simply launches the Wallet. Once the consumer commits to purchasing an item, the merchant's site will recognize that the transaction is from a Wallet owner. The Wallet will instantly fill out all required fields. In addition, rather than the merchant "pulling" in the consumers account information, the Wallet "pushes" guaranteed funds to the merchant's Virtual Private Lockbox, without the merchant obtaining the consumers account info. This transaction is virtually



instantaneous, provides privacy, security, and convenience to the consumer -- and guarantees funding, provides reconciliation, and supplies archival records to the merchant.

Step #	Description
1	User launches browser and selects Wallet icon from browser toolbar.
2	User keys in IPA (Internet Pay Anyone) # and password. The user is authenticated and has access to their Wallet.
3	User is then presented with balance information and can select from several options:
4	User selects "Shop on the Web". Browser could be initially directed to ChaseShop.com for a list of chase-approved merchants, however user is free to navigate to the merchant web site of their choice.
5	User selects item for purchase from merchant web site. Since web Wallet is active, merchant recognizes user as a Wallet customer, and purchase fields (shipping address, name, etc.) are auto-populated from Wallet.
6	Merchant site generates and transmits to user a bill payment message providing the following data: <ul style="list-style-type: none"><li>· Merchant BIN</li><li>· Merchant Account #</li><li>· Transaction ID</li><li>· \$ Amount</li></ul>
7	Bill Payment message is transmitted back to Wallet window. User reviews bill payment message and selects "purchase item".

8	Wallet verifies balance and passes transaction to IPA account; payment conformation sent to the Merchant's website.
9	Bill payment message is passed from user's bank's IPA to the merchant's DDA via the ATM switch.
10	The bill payment record is transmitted from the merchant's DDA to the merchant's Virtual Private Lockbox (VPL).
11	Upon receipt of these guaranteed funds, merchant's payment record can be reconciled against the merchant's purchase records. With VPL, Merchant has a product that allows for secure transaction fulfillment, reconciliation ability, record-keeping and archive possibilities.
12	Merchant ships goods
13	Funds are settled once a day between user's bank's DDA and merchant's bank's DDA.
14	Funds can be swept to merchant's cash concentration bank.
15	DDA could also be swept to a host account

#### Model #2

With respect to Figure 9, Pay Anyone: The Wallet provides the user with tremendous flexibility. Anyone with a Wallet can send funds to anyone else with a Wallet. This funds transfer is instantaneous and at no cost to the consumer, and is conducted in a secure environment.

Step #	Description
1	User launches browser and selects Wallet icon from browser toolbar.
2	User keys in IPA (Internet Pay Anyone) # and password. The user

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	is authenticated and has access to their Wallet.
3	User is then presented with balance information and can select from several options:
4	<p>User selects "Pay Anyone". User is given several options in the Pay Anyone menu screen:</p> <ul style="list-style-type: none"><li>· Manually key in payee's IPA #</li><li>· Select a prior payee from a drop down menu</li><li>· Add/Remove/Edit Payee from drop down menu</li></ul> <p>User keys in (or selects) payee's IPA #, \$ amount, and a description (optional). This payee IPA will be linked to either a Wallet or a VPL, depending on whether the payee is a consumer or a merchant.</p>
5	Payment info. is transmitted to payee's Wallet for IPA # verification as well authorization to pay.
6	<p>Wallet confirms that information is correct and transmits a payment message with the following data:</p> <ul style="list-style-type: none"><li>· Payee BIN</li><li>· Payee Account #</li><li>· Transaction ID</li><li>· \$ Amount</li><li>· description</li></ul>
7	User reviews payment message and selects "OK to Pay".
8	Wallet sends transaction to IPA account; an expected payment record is also transmitted to the payee's Wallet or VPL.
9	Payment message is passed from user's bank's IPA to the payee's DDA via the ATM switch.

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10	The payment record is transmitted from the payee's DDA to the payee's IPA/Wallet
11	Upon receipt of these guaranteed funds, payee's payment record is reconciled against the expected record.
12	Payee now has immediate use of funds. These funds can be used for web shopping, bill payment, pay anyone, or withdrawal via an ATM. If the Payee Wallet or VPL owner does not have access to a PC, they can still utilize their funds through conventional banking methods (by visiting a branch, through the phone, or at any store that carries a credit or debit card reader, using their IPA # and password).
13	Funds are settled once a day between user's bank's DDA and payee's bank's DDA.

#### Model #3A

With respect to Figure 10, Bill Payment-Direct: There are three different bill payment methods described in this document. The first method is the direct model. In this model a biller establishes an e-billing capability on its own web site. Once enrolled in the service, the customer will receive an e-mail notification that a bill is available for payment at the biller's web site. The customer will launch the Wallet from the browser and then access the biller's web site. A payment will then be transmitted from the Wallet to the biller's Virtual Private Lockbox. As in the other models, the transaction is secure, protects the customer's privacy, and provides the biller with guaranteed funding, reconciliation, and archival records.

Step #	Description
	Establishing e-billing relationship
1	Merchant advertises e-billing service via e-mail, mail, or web.
2	User enrolls in e-bill service at biller's web site. After enrollment, user will receive monthly email notification when bills are available.
	Using the Wallet
3	User launches browser and selects Wallet icon from browser toolbar. User keys in IPA # and password. The user is authenticated and has access to their Wallet.
4	User is then presented with balance information and can select from several options:
	<p>User selects "Pay Bills". User is given several options in the Pay Bills menu screen:</p> <ul style="list-style-type: none"> <li>· Pay Bills</li> <li>· Edit Billing information</li> </ul> <p>User selects "pay bills" and navigates to biller's web site (Wallet will already contain user's billing info)</p>
5	Since web Wallet is active, biller's website recognizes user as a Wallet customer. In addition, biller's website verifies that customer has an established e-billing relationship.
6	<p>Biller site generates and transmits to user a bill payment message providing the following data:</p> <ul style="list-style-type: none"> <li>· Biller's BIN</li> </ul>

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	<ul style="list-style-type: none"><li>· Biller's Account #</li><li>· Transaction ID</li><li>· \$ Amount</li></ul>
7	Bill Payment message is transmitted back to Wallet window. User reviews bill payment message and selects "pay bill".
8	Wallet verifies balance and passes transaction to IPA account; payment conformation sent to the Biller's website.
9	Bill payment message is passed from user's bank's IPA to the biller's DDA via the ATM switch.
10	The bill payment record is transmitted from the biller's DDA to the biller's VPL (virtual private lockbox).
11	Upon receipt of these guaranteed funds, biller's payment record is reconciled against the biller's accounts receivable files. With VPL, Merchant has a product that allows for secure transaction fulfillment, reconciliation ability, record-keeping and archive possibilities.
12	Funds are settled once a day between user's bank's DDA and biller's bank's DDA.
13	Funds can be swept to biller's cash concentration bank.

#### Model #3B

With respect to Figure 11, Bill Payment- Service Provider Consolidation: The second bill payment method is similar to the first, however in this model a central service provider consolidates e-bills from different billers, so that the customer has a single web site for reviewing bills and

making payments. The service provider can be seamlessly outfitted with archival capability, so that customers can review their bill payment history. The Wallet provides the consumer with privacy, security and convenience. The Virtual Private Lockbox provides Merchants receiving payments through this web site guaranteed funding, reconciliation and archival records.

Step #	Description
	Establishing e-billing relationship
1	Customer Service Provider (CSP) advertises e-billing service via e-mail, mail, or web.
2	User enrolls in e-bill service at CSP's web site, and selects which bills it wishes to receive. After enrollment, user will receive monthly email notification when bills are available.
	Using the Wallet
3	User launches browser and selects Wallet icon from browser toolbar. User keys in IPA (Internet Pay Anyone) # and password. The user is authenticated and has access to their Wallet.
4	User is then presented with balance information and can select from several options:
	User selects "Pay Bills". User is given several options in the Pay Bills menu screen: <ul style="list-style-type: none"> <li>· Pay Bills</li> <li>· Edit Billing information</li> <li>· Review Billing History</li> </ul> User selects "pay bills" and navigates to CSP's
5	Since web Wallet is active, CSP's website recognizes user as a Wallet customer. In addition, CSP's website verifies that customer has an established e-billing relationship.

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6	User selects which bills to pay, and keys in \$ amount. CSP site generates and transmits to user a bill payment message providing:
7	Bill Payment message is transmitted back to Wallet window. User reviews bill payment message and selects "pay bill".
8	Wallet verifies balance and passes transaction to IPA account; bill payment expected record is transmitted to the CSP's website.
9	Bill payment message is passed from user's bank's IPA to the CSP's DDA via the ATM switch.
10	The bill payment record is transmitted from the CSP's DDA to the CSP's VPL (virtual private lockbox).
11	Upon receipt of these guaranteed funds, CSP's payment record is reconciled against the CSP's accounts receivable file. With VPL, Merchant has a product that allows for secure transaction fulfillment, reconciliation ability, record-keeping and archive possibilities.
12	Funds are settled once a day between user's bank's DDA and billers' bank's DDA.
13	Funds can be swept to biller's cash concentration bank.
14	<u>Note:</u> Multiple record keeping models can be supported. The billers can push billing info. directly to the CSP's web site, or alternatively, bills can be channeled to the CSP via Spectrum.
15	<u>Note:</u> CSP can be outfitted with an archive to store transaction history as well as a customer service unit to resolve transaction inquiries.

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Model #3C

With respect to Figure 12, Bill Payment- Customer Consolidation: In the third bill payment method, the e-bills are delivered directly to the customer in the form of an e-mail. Each e-bill contains a hotlink, which directs the customer to the biller's web site. When the customer activates the Wallet, the web site recognizes the Wallet customer and initiates a payment message. The customer can then push the payment to the biller in the same manner that a payment is pushed in the web model, pay anyone model, and two other bill models. As in the two previous models, the merchant receives the guaranteed funding, reconciliation, and archival records benefits of the Virtual Private Lockbox product.

Step #	Description
	Establishing e-billing relationship
1	Biller advertises e-billing service via e-mail, mail, or web.
2	User enrolls in e-bill service by clicking on "sign me up!" hotlink in email, which launches browser and auto-directs user to biller's web site. After enrollment, user will receive bills directly in their email box.
	Using the Wallet
3	User logs on to email and receives an e-bill. User clicks on payment hotlink in email, which launches browser and auto-directs user to billers web site. User selects Wallet icon from browser toolbar. User keys in IPA (Internet Pay Anyone) # and password. The user is authenticated and has access to their Wallet.
4	Since web Wallet is active, biller's website recognizes user as a

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	Wallet customer. In addition, biller's website verifies that customer has an established e-billing relationship.
5	User keys in \$ amount to pay. Biller's site generates and transmits to user a bill payment message providing the following data: <ul style="list-style-type: none"> <li>· Biller's BIN</li> <li>· Biller's Account #</li> <li>· Transaction ID</li> <li>· \$ Amount</li> </ul>
6	Bill Payment message is transmitted back to Wallet window. User reviews bill payment message and selects "pay bill".
7	Wallet verifies balance and passes transaction to IPA account; a bill payment expected record is transmitted to the Biller's website
8	Bill payment message is passed from user's bank's IPA to the biller's DDA via the ATM switch.
9	The bill payment record is transmitted from the biller's DDA to the biller's VPL (virtual private lockbox).
10	Upon receipt of these guaranteed funds, biller's payment record is reconciled against the biller's accounts receivable file. With VPL, Merchant has a product that allows for secure transaction fulfillment, reconciliation ability, record-keeping and archive possibilities.
11	Funds are settled once a day between user's bank's DDA and billers' bank's DDA.
12	Funds can be swept to biller's cash concentration bank.

Although the present invention has been described in relation to particular embodiments thereof, many other variations and other uses will be apparent to those skilled in the art. It is preferred, therefore, that the present invention be limited not by the specific disclosure herein, but only by the gist and scope of the disclosure.

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We claim:

1. A method for effectuating an electronic payment between a payor and a payee, the payor having a payor account at a payor bank and the payee having a payee account at a payee bank, the method comprising the steps of:

generating a payment request identifying the payee bank, the payee  
5 account and an amount of the payment;

transmitting the payment request to the payor bank;

debiting the payor account by the amount of the payment;

transmitting a transaction instruction representing a credit in the amount  
of the payment from the payor bank, through an Automated Teller Machine  
10 (ATM) system to the payee bank; and

crediting the payee account in the amount of the payment in response to  
the receipt of the transaction instruction.

2. The method as recited in claim 1, further comprising the step of  
retrieving payee information that identifies the payee bank and the payee  
account.

3. The method as recited in claim 2, wherein the retrieving step further  
comprises the step of retrieving the payee information from an Internet web  
site.

4. The method as recited in claim 3, wherein the retrieving step is  
automatic.

5. The method as recited in claim 1, wherein the step of transmitting the payment request to the payor bank further comprises the step of transmitting the payment request through the Internet.

6. The method as recited in claim 5, wherein the step of transmitting the payment request to the payor bank is accomplished by using a personal computer.

7. The method as recited in claim 5, wherein the step of transmitting the payment request to the payor bank is accomplished by using an Internet enabled ATM machine.

8. The method as recited in claim 1, wherein the step of transmitting the payment request to the payor bank further comprises the step of transmitting the payment request by telephone.

9. The method as recited in claim 1, further comprising the step of transmitting a guarantee of the payment from the payor bank to the payee.

10. The method as recited in claim 9, wherein the transmittal of the guarantee is directly to the payee.

11. The method as recited in claim 9, wherein the transmittal of the guarantee is from the payor bank to the payor to the payee.

12. The method as recited in claim 9, further comprising the step of the payor bank digitally signing the guarantee.

13. The method as recited in claim 1, wherein the payee account is a deposit only account.

14. The method as recited in claim 1, wherein the payee is a billing company, the payor is a customer of the billing company and the payment is in response to a bill from the billing company.

15. The method as recited in claim 14, further comprising the step of receiving the bill electronically.

16. The method as recited in claim 15, wherein bill is electronically received via E-mail.

17. The method as recited in claim 15, wherein bill is electronically received from an Internet site.

18. The method as recited in claim 14, further comprising the step of receiving a template containing at least information identifying the payee bank and payee account .

19. The method as recited in claim 18, further comprising the steps of: inserting into the template the amount of the payment; and

generating the payment request in response to the information contained in the template .

20. A method for effectuating electronic payments for online purchases made by a consumer from a merchant, the method comprising the steps of:

retrieving from an Internet site of the merchant a purchase amount and merchant information identifying a merchant's financial institution and a merchant's account;

forming a payment request including the purchase amount and the merchant information;

transmitting the payment request to a financial institution at which the consumer maintains an account;

debiting the consumer's account by the purchase amount;

generating a payment instruction for crediting the merchant's account by the purchase amount

transmitting the payment instruction to the merchant's financial institution through an Automated Teller Machine (ATM); and

crediting the merchant's account by the purchase amount.

21. The method as recited in claim 20, wherein the retrieving step is automatic.

22. The method as recited in claim 20, wherein the step of transmitting the payment request to the consumer's financial institution further comprises the step of transmitting the payment request through the Internet.

23. The method as recited in claim 22, wherein the step of transmitting the payment request to the consumers's financial institution is accomplished by using a personal computer.

24. The method as recited in claim 22, wherein the step of transmitting the payment request to the consumer's financial institution is accomplished by using an Internet enabled ATM machine.

25. The method as recited in claim 20, wherein the step of transmitting the payment request to the consumer's financial institution further comprises the step of transmitting the payment request by telephone.

26. The method as recited in claim 20, further comprising the steps of:  
generating a payment advice guaranteeing the payment amount will be credited to the merchant's account; and  
transmitting the payment advice to the merchant.

27. The method as recited in claim 26, wherein the transmittal of the guarantee is directly to the merchant.

28. The method as recited in claim 27, wherein the transmittal of the guarantee is made using a different Internet Protocol (IP) address from the IP address used by the consumer to view the merchant's Internet site.



29. The method as recited in claim 26, wherein the transmittal of the guarantee is from the consumer's financial institution to the consumer to the merchant.

30. The method as recited in claim 26, further comprising the step of the payor bank digitally signing the guarantee.

31. The method as recited in claim 20, wherein the merchant's account is a deposit only account.

32. The method as recited in claim 20, wherein the consumer's account is a demand deposit account.

33. The method as recited in claim 20, wherein the consumer's account is an account only used for making payments using the method of the present invention.

34. The method as recited in claim 20, wherein the consumer's account is funded from a different account maintained by the consumer.

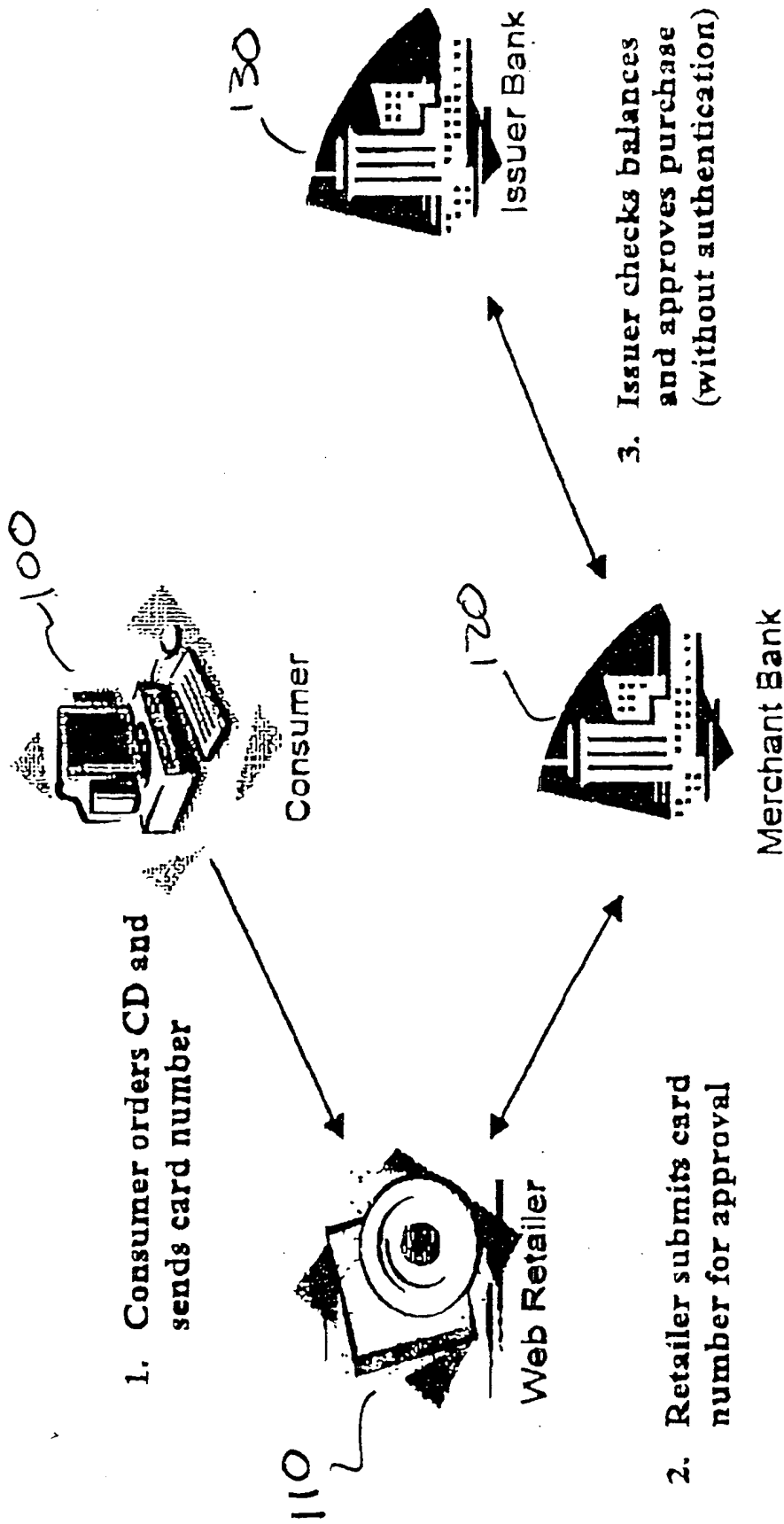
35. The method as recited in claim 34, wherein the different account is a demand deposit account.

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## ABSTRACT OF THE INVENTION

A method for effectuating electronic payments more specifically for making electronic payments for Internet purchases. Upon finding an item which it wishes to purchase on an Internet retailer's web site, a consumer using its Internet software extracts from the web site a price quote for the proposed purchase along with an identification of the merchant's bank and account number. The customer transmits a payment request message to its own bank over the Internet. This payment request message simultaneously requests that the consumer's account be debited for the amount of the price quote and that the payment be made crediting the merchants account at the merchants bank. The consumer's bank generates a payment advice that guarantees the payment. The payment advice is transmitted to the merchant. With guaranteed funding, the merchant can immediately deliver the goods of services to the consumer. The customer's bank credits the merchant's account using the regional ATM network infrastructure.

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FIG. 1  
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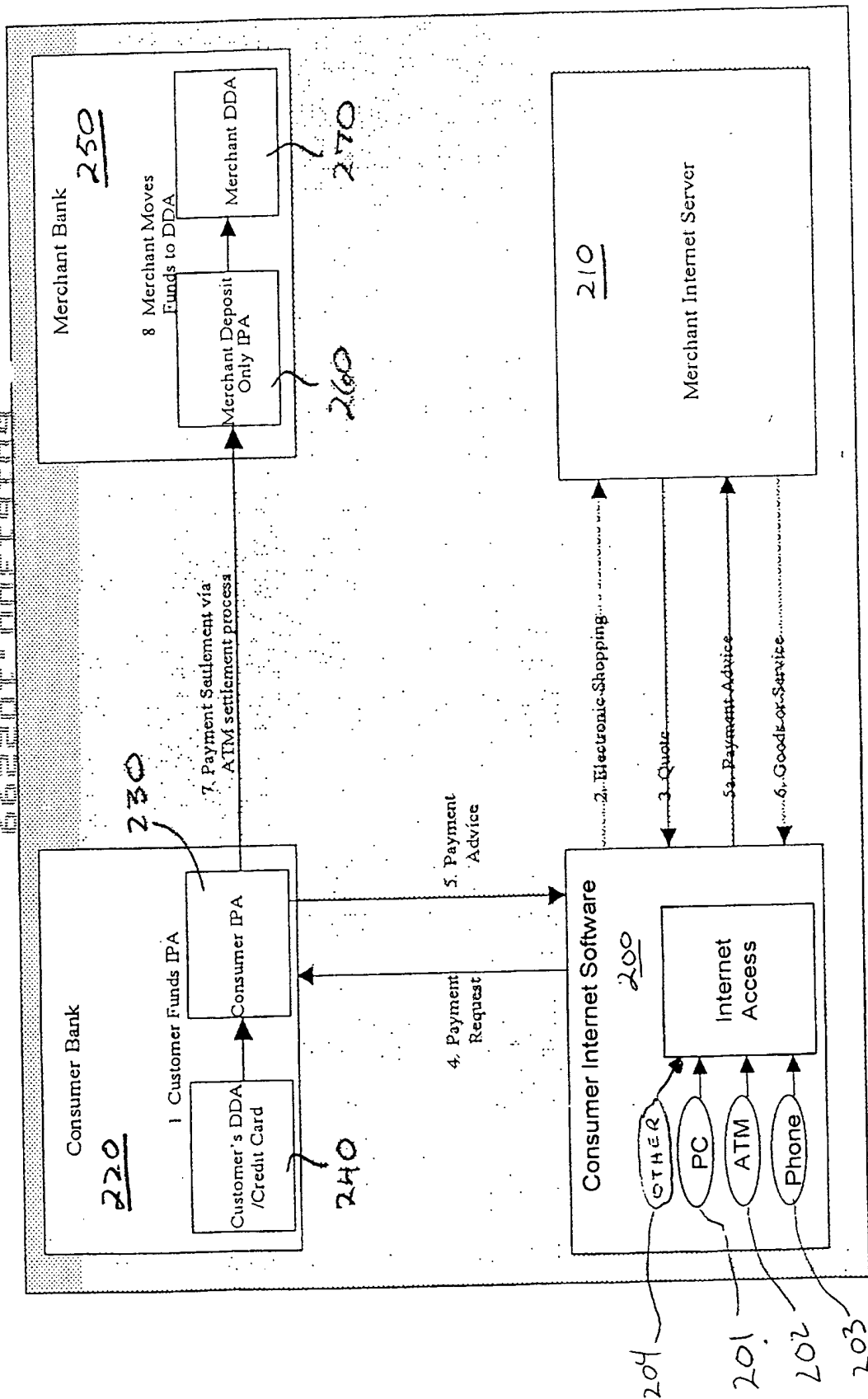


FIG. 2

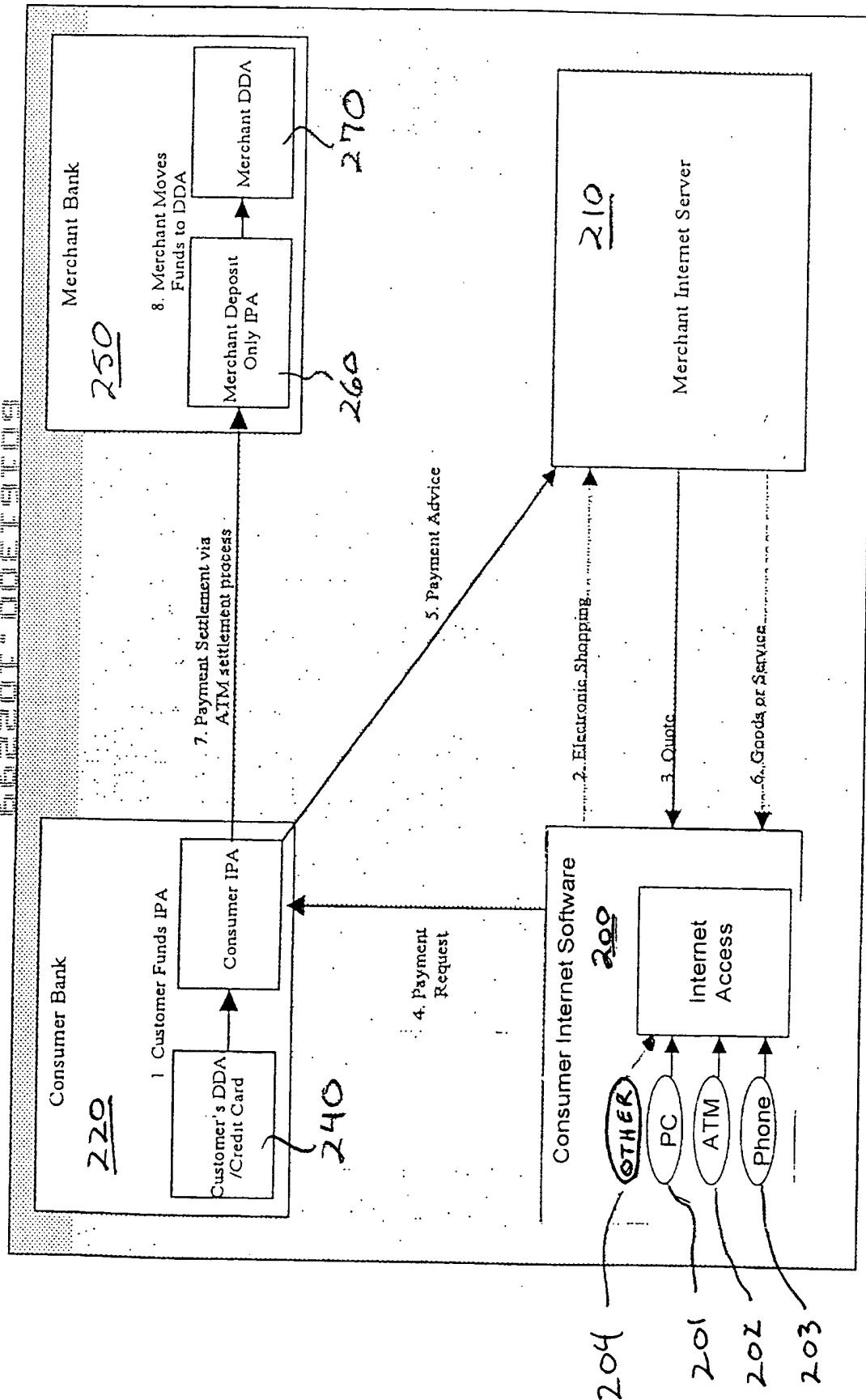


FIG. 3

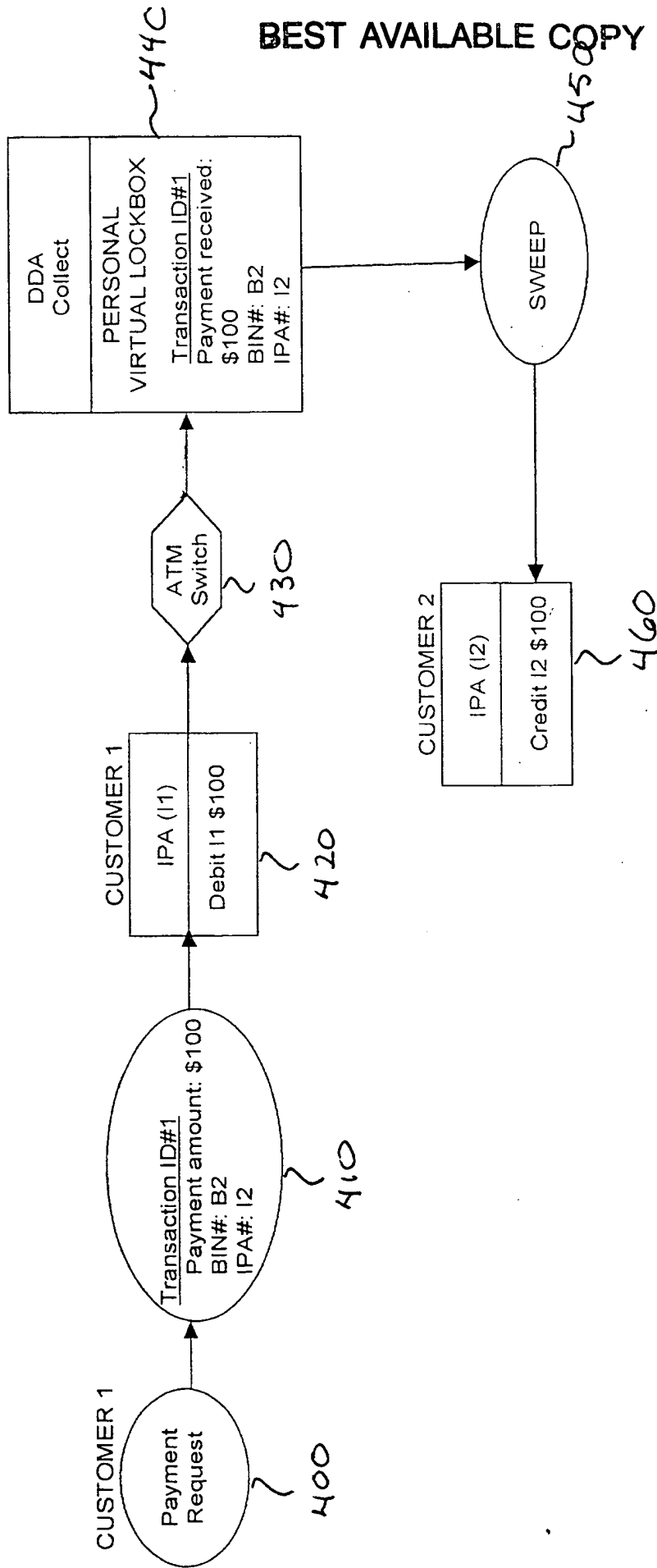


FIG. 4

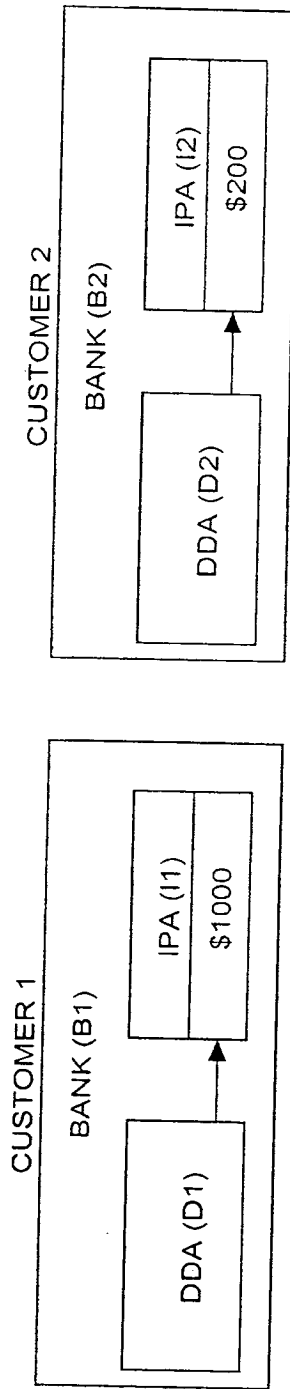


Fig. 5

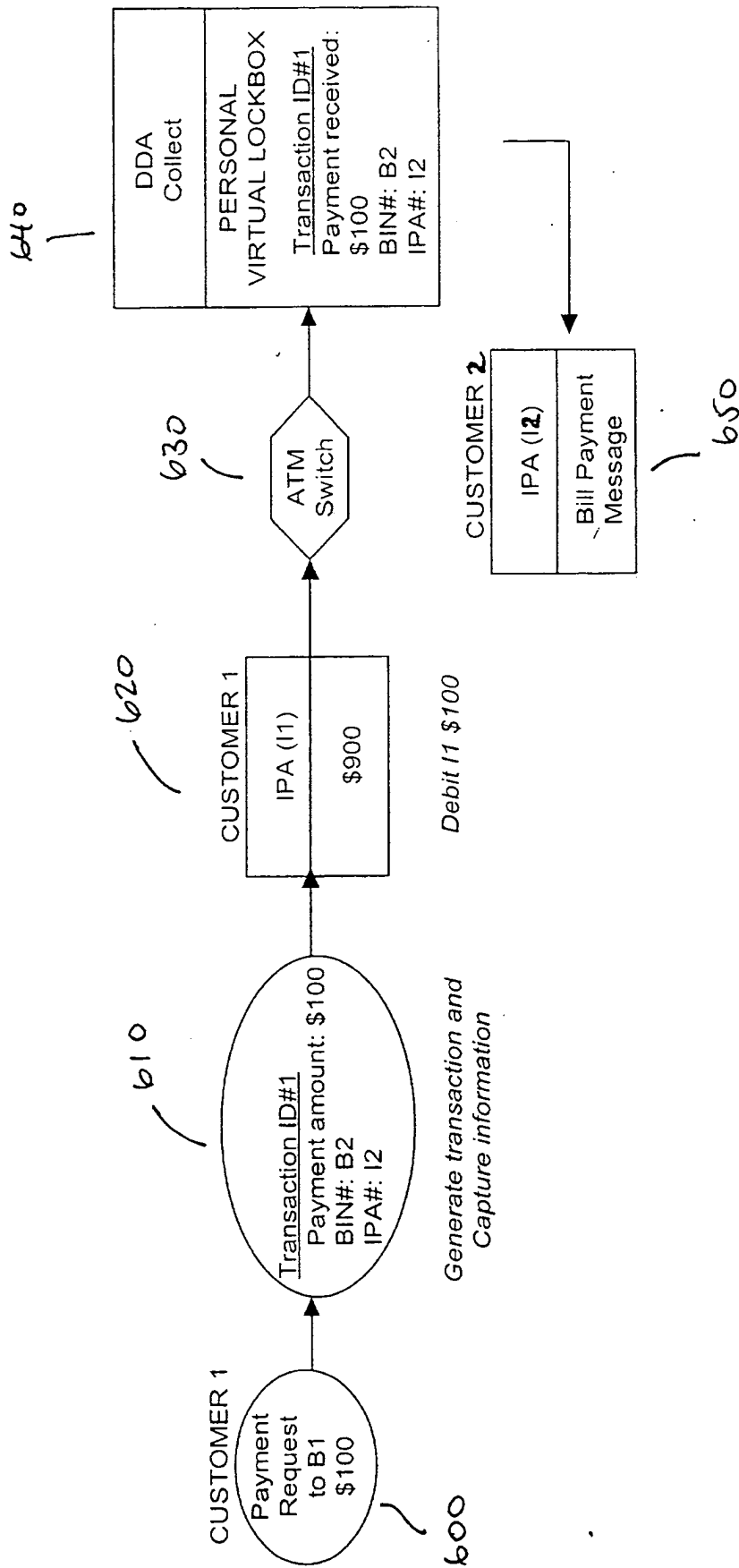
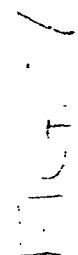


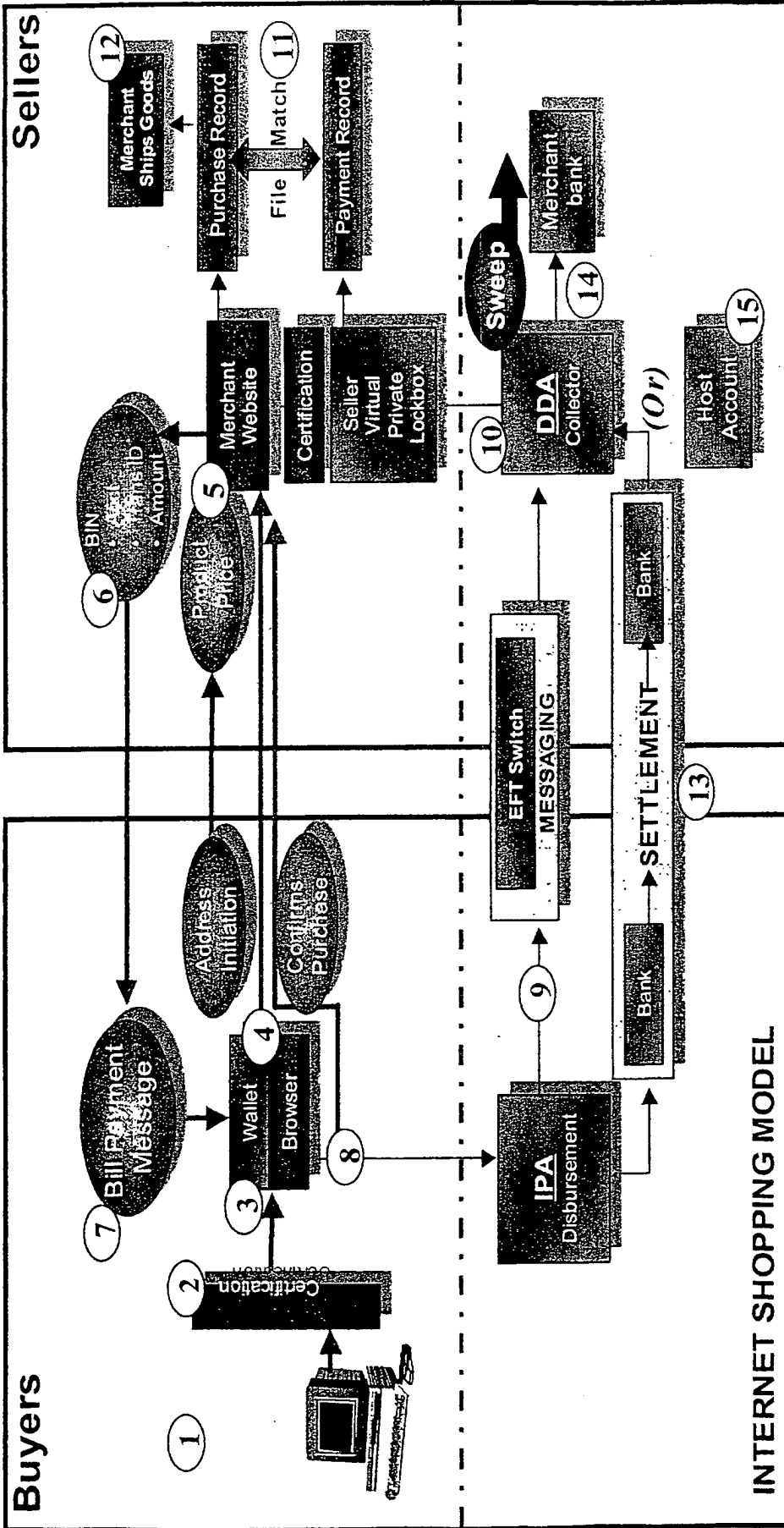
Fig. 6.



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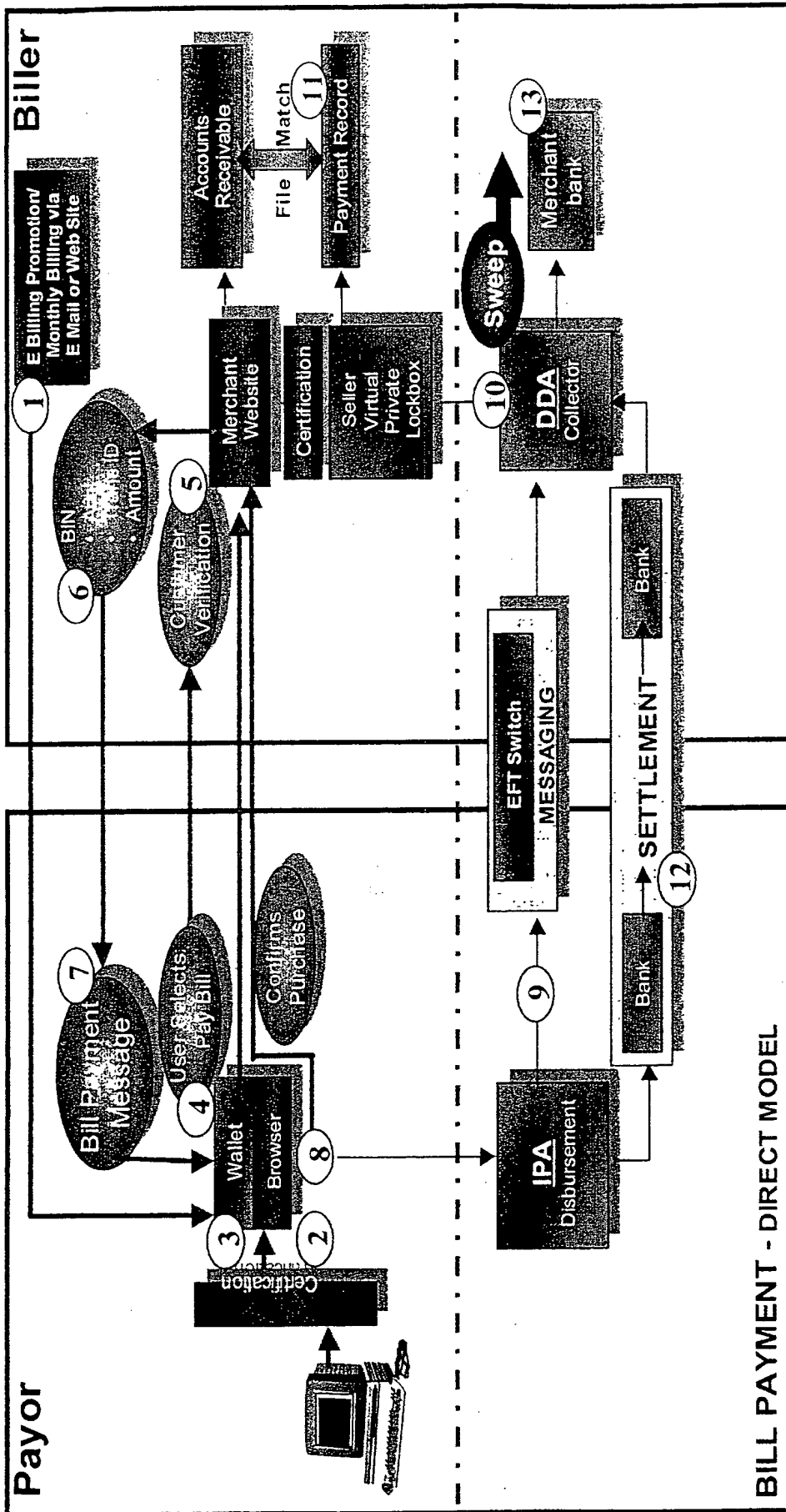
# GLOBAL INTERNET PAY ANYONE MODEL - # 1



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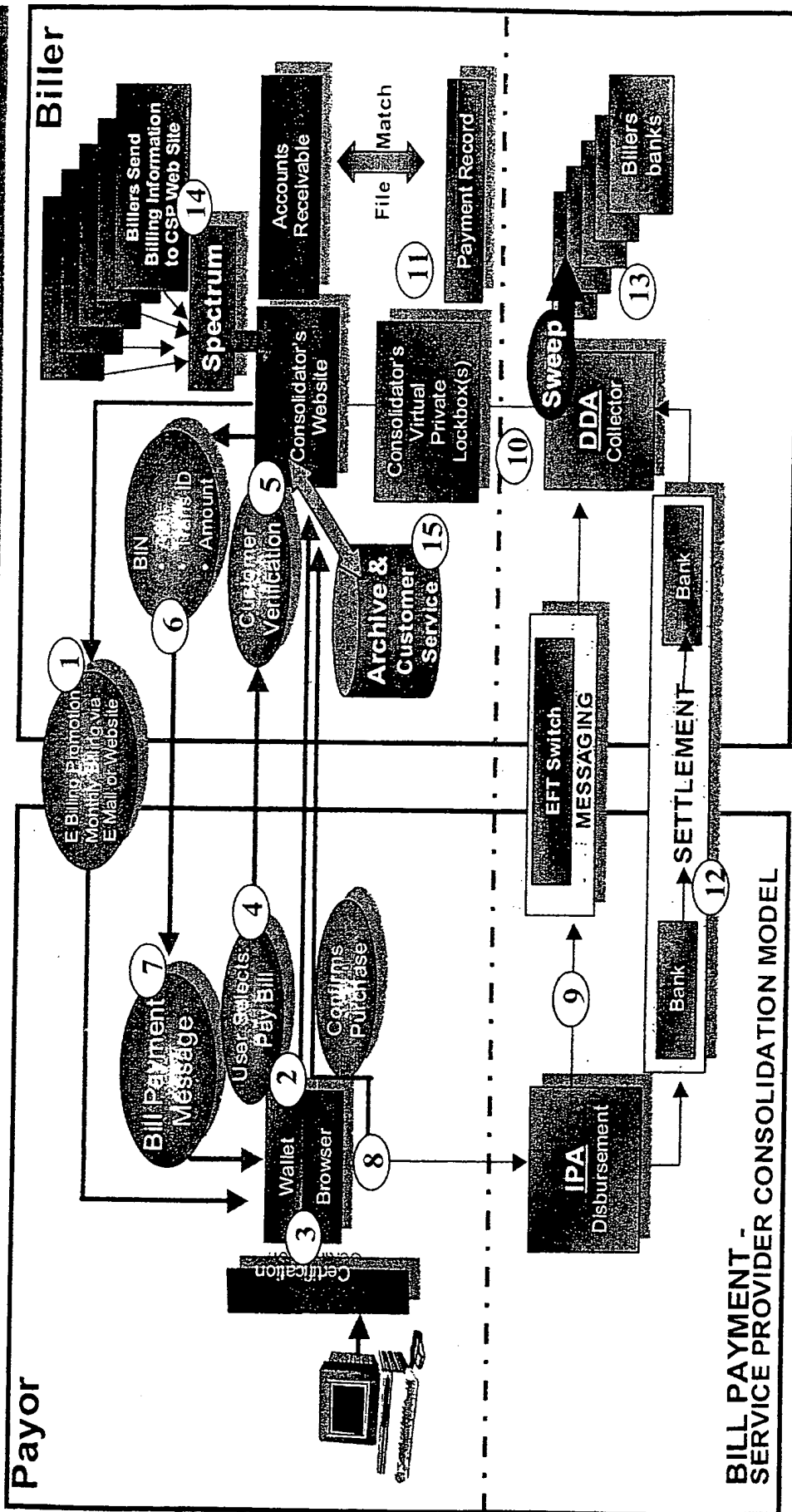
# GLOBAL INTERNET BILL PAY ANYONE MODEL - # 3A



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Chase Check Strategy

# GLOBAL INTERNET BILL PAY ANYONE MODEL - # 3B



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**GLOBAL INTERNET BILL PAY ANYONE MODEL - #3C**

